

I claim:

1. A method for spreading particulate material onto a surface, said method comprising:
providing a hopper for storing particulate material, said hopper including an upper section and a bottom section, said bottom section including a base surface and a lower discharge opening;
resting said base surface on a top surface of a bumper of a vehicle;
releasably retaining said hopper on said vehicle using a retaining arrangement, wherein said retaining arrangement includes a band that connects to at least a portion of said upper section of said hopper, at least one end of said band is adapted to be releasably connected to said vehicle and/or said upper section of said hopper to maintain at least a portion of a back face of said upper section at least closely adjacent to a tailgate of a said vehicle; and
discharging said particulate material through said lower discharge opening.
2. The method as defined in claim 1, wherein said band is at least partially flexible.
3. The method as defined in claim 1, wherein said band is releasably connected to said vehicle.
4. The method as defined in claim 2, wherein said band is releasably connected to said vehicle.
5. The method as defined in claim 1, wherein said band at least partially fits about a portion of a front face of said upper section of said hopper.
6. The method as defined in claim 4, wherein said band at least partially fits about a portion of a front face of said upper section of said hopper.
7. The method as defined in claim 1, wherein a front face of said upper section includes

a band retainer adapted to at least partially retain said band on said front face.

8. The method as defined in claim 6, wherein said front face of said upper section includes a band retainer adapted to at least partially retain said band on said front face.

9. The method as defined in claim 1, wherein said retaining arrangement includes a band tensioner adapted to at least partially tighten said band.

10. The method as defined in claim 7, wherein said retaining arrangement includes a band tensioner adapted to at least partially tighten said band.

11. The method as defined in claim 8, wherein said retaining arrangement includes a band tensioner adapted to at least partially tighten said band.

12. The method as defined in claim 1, wherein said retaining arrangement includes at least one bracket adapted to connect to a tailgate of a vehicle.

13. The method as defined in claim 11, wherein said retaining arrangement includes at least one bracket adapted to connect to a tailgate of a vehicle.

14. The method as defined in claim 1, wherein said bottom section includes a bumper post extending downwardly from said bottom section and adapted to at least partially retain said base surface at least closely adjacent said bumper.

15. The method as defined in claim 5, wherein said bottom section includes a bumper post extending downwardly from said bottom section and adapted to at least partially retain said base surface at least closely adjacent said bumper.

16. The method as defined in claim 7, wherein said bottom section includes a bumper post extending downwardly from said bottom section and adapted to at least partially retain said base surface at least closely adjacent said bumper.

17. The method as defined in claim 13, wherein said bottom section includes a bumper post extending downwardly from said bottom section and adapted to at least partially retain said base surface at least closely adjacent said bumper.

18. The method as defined in claim 14, wherein said bumper post is at least partially adapted to at least partially extend into a hitch ball hole.

19. The method as defined in claim 17, wherein said bumper post is at least partially adapted to at least partially extend into a hitch ball hole.

20. The method as defined in claim 14, wherein said bumper post is at least partially adapted to at least partially extend into an opening in said bumper.

21. The method as defined in claim 17, wherein said bumper post is at least partially adapted to at least partially extend into an opening in said bumper.

22. The method as defined in claim 14, wherein said bumper post is at least partially adapted to at least partially extend into an opening between said bumper and said vehicle.

23. The method as defined in claim 17, wherein said bumper post is at least partially adapted to at least partially extend into an opening between said bumper and said vehicle.

24. The method as defined in claim 1, including the step of vibrating said hopper.

25. The method as defined in claim 19, including the step of vibrating said hopper.
26. The method as defined in claim 1, including the step of spreading said particulate material using a broadcast spreader connected to said bottom section of said hopper.
27. The method as defined in claim 25, including the step of spreading said particulate material using a broadcast spreader connected to said bottom section of said hopper.
28. The method as defined in claim 26, wherein said broadcast spreader includes a motor guard that encapsulates a majority of a motor of said broadcast spreader.
29. The method as defined in claim 27, wherein said broadcast spreader includes a motor guard that encapsulates a majority of a motor of said broadcast spreader.
30. The method as defined in claim 1, wherein said upper section includes a viewing opening.
31. The method as defined in claim 29, wherein said upper section includes a viewing opening.
32. The method as defined in claim 1, wherein said upper section includes a fill opening in a top surface of said upper section.
33. The method as defined in claim 31, wherein said upper section includes a fill opening in a top surface of said upper section.
34. The method as defined in claim 32, wherein said fill opening is at least partially closed by a removable cap.

35. The method as defined in claim 33, wherein said fill opening is at least partially closed by a removable cap.

36. The method as defined in claim 1, wherein a front face of said upper section includes an arcuate surface.

37. The method as defined in claim 7, wherein said front face of said upper section includes an arcuate surface.

38. The method as defined in claim 10, wherein said front face of said upper section includes an arcuate surface.

39. The method as defined in claim 35, wherein said front face of said upper section includes an arcuate surface.

40. The method as defined in claim 1, wherein said hopper is a plastic molded unit.

41. The method as defined in claim 39, wherein said hopper is a plastic molded unit.

42. The method as defined in claim 1, wherein said base surface includes a gripping surface adapted to at least partially maintain at least a portion of said bottom section on said top surface of said bumper.

43. The method as defined in claim 7, wherein said base surface includes a gripping surface adapted to at least partially maintain at least a portion of said bottom section on said top surface of said bumper.

44. The method as defined in claim 38, wherein said base surface includes a gripping

surface adapted to at least partially maintain at least a portion of said bottom section on said top surface of said bumper.

45. The method as defined in claim 41, wherein said base surface includes a gripping surface adapted to at least partially maintain at least a portion of said bottom section on said top surface of said bumper.

46. The method as defined in claim 1, wherein said bottom section includes at least one structural support component.

47. The method as defined in claim 45, wherein said bottom section includes at least one structural support component.

48. The method as defined in claim 1, wherein said bottom section includes multiple wall layers.

49. The method as defined in claim 40, wherein said bottom section includes multiple wall layers.

50. The method as defined in claim 47, wherein said bottom section includes multiple wall layers.

51. The method as defined in claim 1, wherein said upper section includes multiple wall layers.

52. The method as defined in claim 48, wherein said upper section includes multiple wall layers.

53. The method as defined in claim 49, wherein said upper section includes multiple wall layers.

54. The method as defined in claim 50, wherein said upper section includes multiple wall layers.

55. A method for spreading particulate material from a hopper attached to the rear of a vehicle, said method comprising:

providing a hopper for storing particulate material, said hopper including an upper section and bottom section, said bottom section having a lower material discharge chamber terminating in a lower discharge opening;

positioning a broadcast spreader beneath said discharge opening;

discharging the particulate material through said lower discharge opening onto said broadcast spreader; and

retaining said hopper to the rear of the vehicle using a retaining arrangement including a retaining band that at least partially fits about a front face of said upper section and a bumper post extending downwardly from said bottom section.

56. The method as defined in claim 55, wherein said retaining band is at least partially flexible and releasably connectable to said vehicle, said retaining band adapted to draw said upper section of said hopper toward a tailgate of the vehicle.

57. The method as defined in claim 55, wherein said front face of said upper section includes a band retainer adapted to at least partially retain said retaining band on said front face.

58. The method as defined in claim 56, wherein said front face of said upper section includes a band retainer adapted to at least partially retain said retaining band on said front face.

59. The method as defined in claim 55, wherein said retaining arrangement includes a band tensioner adapted to at least partially tighten said retaining band.

60. The method as defined in claim 56, wherein said retaining arrangement includes a band tensioner adapted to at least partially tighten said retaining band.

61. The method as defined in claim 58, wherein said retaining arrangement includes a band tensioner adapted to at least partially tighten said retaining band.

62. The method as defined in claim 55, wherein said front face of said upper section includes an arcuate surface.

63. The method as defined in claim 60, wherein said front face of said upper section includes an arcuate surface.

64. The method as defined in claim 61, wherein said front face of said upper section includes an arcuate surface.

65. The method as defined in claim 55, wherein said bumper post is at least partially adapted to at least partially extend into a hitch ball hole.

66. The method as defined in claim 55, wherein said bumper post is at least partially adapted to at least partially extend into an opening in said bumper.

67. The method as defined in claim 55, wherein said bumper post is at least partially adapted to at least partially extend into an opening between said bumper and said vehicle.

68. The method as defined in claim 64, wherein said bumper post is at least partially

adapted to at least partially extend into a hitch ball hole.

69. The method as defined in claim 55, including the step of vibrating said hopper.

70. The method as defined in claim 61, including the step of vibrating said hopper.

71. The method as defined in claim 55, wherein said broadcast spreader includes a motor guard that at least partially encapsulates said motor.

72. The method as defined in claim 70, wherein said broadcast spreader includes a motor guard that at least partially encapsulates said motor.

73. The method as defined in claim 55, wherein said upper section includes a fill opening in a top surface of said upper section.

74. The method as defined in claim 72, wherein said upper section includes a fill opening in a top surface of said upper section.

75. The method as defined in claim 73, wherein said fill opening is at least partially closed by a removable cap.

76. The method as defined in claim 74, wherein said fill opening is at least partially closed by a removable cap.

77. The method as defined in claim 55, wherein said hopper is a plastic molded unit.

78. The method as defined in claim 76, wherein said hopper is a plastic molded unit.

79. The method as defined in claim 55, wherein said bottom and upper sections include multiple wall layers.

80. The method as defined in claim 77, wherein said bottom and upper sections include multiple wall layers.

81. The method as defined in claim 78, wherein said bottom and upper sections include multiple wall layers.

82. The method as defined in claim 55, including the step of drawing particulate material through said lower discharge opening.

83. The method as defined in claim 81, including the step of drawing particulate material through said lower discharge opening.

84. The method as defined in claim 55, wherein said bottom section includes a gripping surface adapted to at least partially maintain at least a portion of said bottom section on a top surface of said bumper.

85. The method as defined in claim 83, wherein said bottom section includes a gripping surface adapted to at least partially maintain at least a portion of said bottom section on a top surface of said bumper.

86. The method as defined in claim 55, wherein said upper section includes a viewing opening.

87. The method as defined in claim 85, wherein said upper section includes a viewing opening.

88. The method as defined in claim 55, wherein said retaining arrangement includes at least one bracket adapted to connect to a tailgate of a vehicle.

89. The method as defined in claim 87, wherein said retaining arrangement includes at least one bracket adapted to connect to a tailgate of a vehicle.

90. An improved spreader assembly adapted to be mounted on a vehicle having a tailgate and a bumper, the improvement comprising a hopper having an upper section and a bottom section, said bottom section having a lower material discharge chamber terminating in a lower discharge opening; a broadcast spreader positioned beneath said discharge opening; and a spill plate to at least partially regulate the flow of particulate material through said discharge opening.

91. The improvement as defined in claim 90, including a draw down mechanism positioned above said broadcast spreader to draw particulate material through said discharge opening.

92. The improvement as defined in claim 91, wherein said draw down mechanism is positioned at least partially in said discharge opening.

93. The improvement as defined in claim 91, wherein said draw down mechanism includes an auger-type blade.

94. The improvement as defined in claim 92, wherein said draw down mechanism includes an auger-type blade.

95. The improvement as defined in claim 90, wherein said spill plate is adjustably mounted in said discharge opening.

96. The improvement as defined in claim 94, wherein said spill plate is adjustably mounted in said discharge opening.

97. The improvement as defined in claim 90, including a motor to move at least a portion of said draw down mechanism.

98. The improvement as defined in claim 97, including a motor shaft driven by said motor.

99. The improvement as defined in claim 98, wherein said spill plate and said draw down mechanism are mounted to said motor shaft.

100. The improvement as defined in claim 99, wherein said spill plate is adjustably mounted to said motor shaft.

101. The improvement as defined in claim 91, wherein said spill plate is mounted below said draw down mechanism.

102. The improvement as defined in claim 90, wherein said spill plate is mounted below said discharge opening.

103. The improvement as defined in claim 93, wherein said spill plate is mounted below said draw down mechanism.

104. The improvement as defined in claim 90, wherein said upper section includes a top.

105. The improvement as defined in claim 104, wherein said top is removable.

106. The improvement as defined in claim 104, wherein said top includes a reinforcement arrangement.

107. The improvement as defined in claim 105, wherein said top includes a reinforcement arrangement.

108. The improvement as defined in claim 106, wherein said reinforcement arrangement includes ribs.

109. The improvement as defined in claim 107, wherein said reinforcement arrangement includes ribs.

110. The improvement as defined in claim 106, wherein said reinforcement arrangement is radially disposed about an opening in said top.

111. The improvement as defined in claim 107, wherein said reinforcement arrangement is radially disposed about an opening in said top.

112. The improvement as defined in claim 90, wherein said upper section includes a front face.

113. The improvement as defined in claim 112, said upper section includes retainers attached to said front face.

114. The improvement as defined in claim 113, wherein said retainers have an L-shaped configuration.

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115. The improvement as defined in claim 90, wherein said particulate matter includes a material selected from the group consisting of salt, sand, ash, gravel, calcium carbonate, other deicing agents, fertilizer, seed, weed control, insecticide, larvicide, lime and combinations thereof.